

Listing of Claims:

1. (Currently Amended) A recombinant polynucleotide, the polynucleotide comprising a first and a second sequence, the first sequence encoding a signal peptide comprising a TAT signal and a Sec avoidance signal and the second sequence encoding a heterologous protein, wherein the sequence of the signal peptide is

M-X₁-K/R-X₂-K/R-X₃-RR-X₄-K/R-A (SEQ ID NO: 41)

in which X₁ is a sequence of 0 to 10 amino acids;
X₂ is a sequence of 0 to 3 amino acids;
X₃ is a sequence of 0 to 10 amino acids; and
X₄ is a sequence of 15 to 24 amino acids in
which at least 75% up to about 90% of the
residues are hydrophobic.

2. (Original) A recombinant polynucleotide according to claim 1 wherein X₁ is a sequence of 0 to 5 amino acids, and is preferably 0.
3. (Previously Presented) A recombinant polynucleotide according to claim 1 wherein X₂ is a sequence of 0 or 1 amino acid, preferably 0.
4. (Previously Presented) A recombinant polynucleotide according to claim 1 wherein X₃ is a sequence of 0 to 5 amino acids, preferably 0.
5. (Previously Presented) A recombinant polynucleotide according to claim 1 wherein X₄ is a sequence of at least 20 amino acids of which at least 18 are hydrophobic amino acids.
6. (Previously Presented) A recombinant polynucleotide according to claim 1 wherein X₄ is 23 amino acids.

7. (Previously Presented) A recombinant polynucleotide according to claim 1 wherein the sequence of the signal peptide is MKKRRVVNSVLLLLLLLASALALTVPMAKA (SEQ ID NO:1).
8. (Currently Amended) A signal peptide, the signal having the sequence

M-X₁-K/R-X₂-K/R-X₃-RR-X₄-K/R-A (SEQ ID NO: 41)

in which X₁ is a sequence of 0 to 10 amino acids;
X₂ is a sequence of 0 to 3 amino acids;
X₃ is a sequence of 0 to 10 amino acids; and
X₄ is a sequence of 15 to 24 amino acids in
which at least 75% up to about 90% of the
residues are hydrophobic.

9. (Original) A signal peptide according to claim 8 wherein X₁ is a sequence of 0 to 5 amino acids, and is preferably 0.
10. (Previously Presented) A signal peptide according to claim 8 wherein X₂ is a sequence of 0 to 1 amino acid, preferably 0.
11. (Previously Presented) A signal peptide according to claim 8 wherein X₃ is a sequence of 0 to 5 amino acids, preferably 0.
12. (Previously Presented) A signal peptide according to claim 8 wherein X₄ is a sequence of at least 20 amino acids of which at least 18 are hydrophobic amino acids.
13. (Previously Presented) A signal peptide according to claim 8 wherein X₄ is 23 amino acids.
14. (Previously Presented) A signal peptide according to claim 8 wherein the sequence of the signal peptide is

MKKRRVVNSVLLLLLLLASALALTVAPMAKA (SEQ ID NO: 1).

15. (Currently Amended) A method of producing a heterologous polypeptide from a host cell comprising a TAT translocation system, the method comprising:

- (i) transforming the host cell with a DNA sequence encoding the heterologous polypeptide and a signal peptide wherein the signal peptide comprises a TAT signal and a Sec avoidance signal wherein the sequence of the signal peptide is

M-X₁-K/R-X₂-K/R-X₃-RR-X₄-K/R-A (SEQ ID NO: 41)

in which X₁ is a sequence of 0 to 10 amino acids;
X₂ is a sequence of 0 to 3 amino acids;
X₃ is a sequence of 0 to 10 amino acids; and
X₄ is a sequence of 15 to 24 amino acids in which at least 75% up to about 90% of the residues are hydrophobic.

- (ii) culturing the host cell under conditions which allow expression of the heterologous polypeptide; and

(iii) recovering the heterologous polypeptide secreted from the host cell via the TAT translocation system.

16. (Original) A method according to claim 15 wherein X₁ is sequence of 0 to 5 amino acids, and is preferably 0.

17. (Previously Presented) A method according to claim 15 wherein X₂ is a sequence of 0 or 1 amino acid, preferably 0.

18. (Previously Presented) A method according to claim 15 wherein X₃ is a sequence of 0 to 5 amino acids, preferably

0.

19. (Previously Presented) A method according to claim 15 wherein X_4 is a sequence of at least 20 amino acids of which at least 18 are hydrophobic amino acids.
20. (Previously Presented) A method according to claim 15 wherein X_4 is 23 amino acids.
21. (Previously Presented) A method according to claim 15 wherein the sequence of the signal peptide is MKKRRVVNSVLLLLLLASALALTVAPMAKA (SEQ ID NO:1).
22. (Previously Presented) A method according to claim 15 wherein the host cell is *Bacillus* sp.
23. (Original) A method according to claim 22 wherein the host cell is selected from the group consisting of *Bacillus choshinensis*, *Bacillus brevis*, *Bacillus subtilis*, *Bacillus licheniformis*, and *Bacillus megatorium*.
24. (Original) A method according to claim 22 wherein the host cell is *Bacillus choshinensis*.
25. (Previously Presented) A method according to claim 15 wherein the heterologous polypeptide is a polypeptide which readily folds in the cytoplasm.
26. (Previously Presented) A method according to claim 15 wherein the polynucleotide encoding the mature polypeptide has a sequence selected from:
 - (i) a sequence of nucleotides shown in SEQ ID NO:29 from nucleotide 85 to 1155;
 - (ii) a sequence that hybridises to SEQ ID NO:29 from nucleotide 85 to 1155 under conditions of

high stringency;

(iii) a sequence which is greater than 90% identical to SEQ ID NO:29 from nucleotide 85 to 1155; and

(iv) a sequence that encodes the amino acid sequence provided in SEQ ID NO:30 from residue 29 to 384.

27. (Previously Presented) A method according to claim 15 wherein the mature heterologous polypeptide comprises the sequence provided in SEQ ID NO:30 from residue 29 to 384; or a polypeptide which is greater than 90% identical to the sequence provided in SEQ ID NO:30.
28. (Previously Presented) A substantially purified polypeptide produced according to the method of claim 15.
29. (Previously Presented) A vector comprising the recombinant polynucleotide according to claim 1.
30. (Previously Presented) A host cell comprising the recombinant polynucleotide according to claim 1.